



PNAMP Habitat Data Sharing Task Scoping Workshop High Level Indicators

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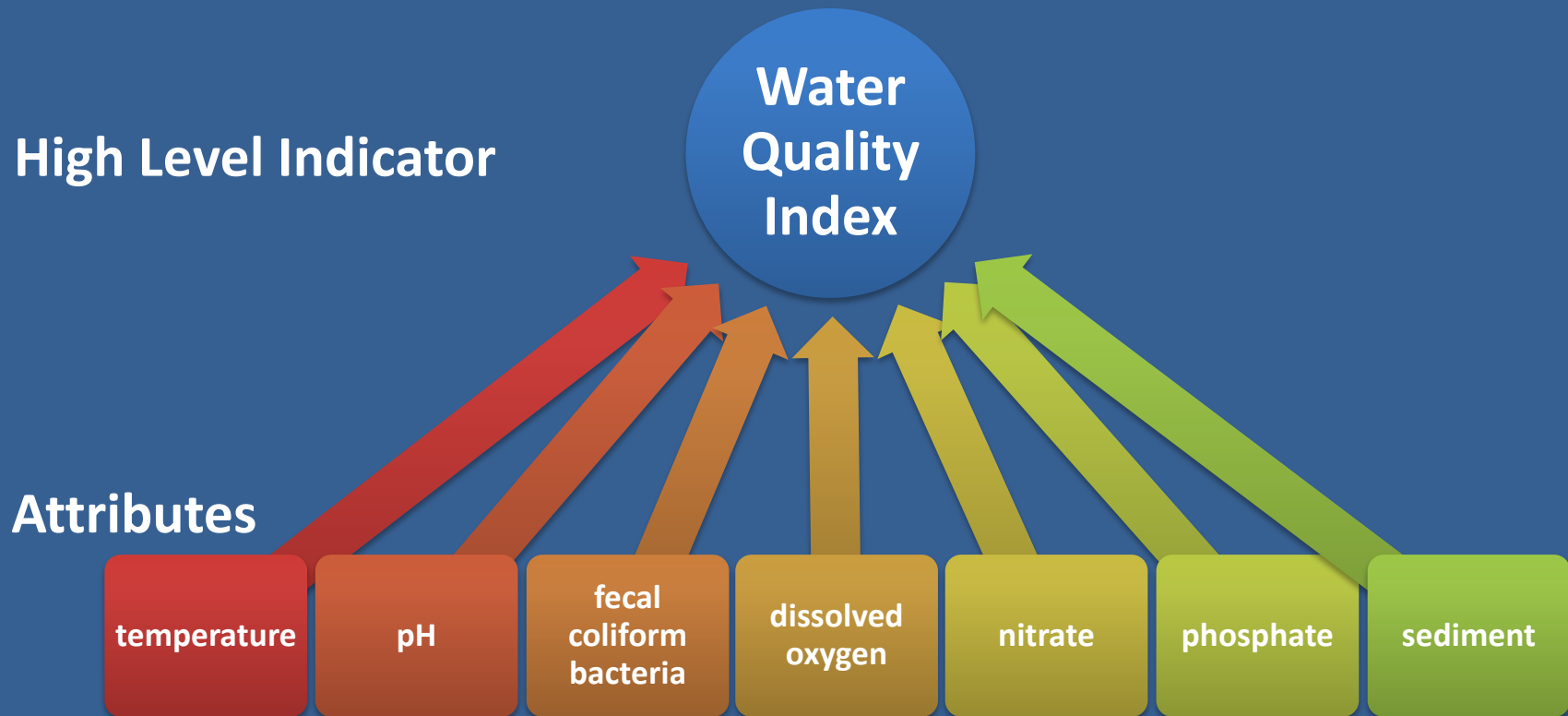
Definitions

- High Level Indicators
 - categories of data that are measured, compiled, and 'rolled-up'
- Reporting Measures
 - the way indicators are reported
- Metrics
 - what actually is measured

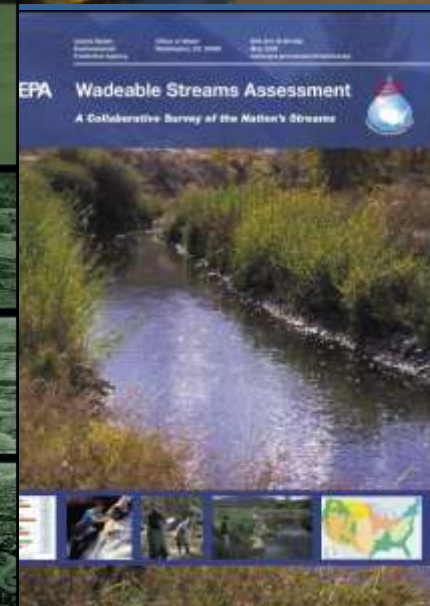
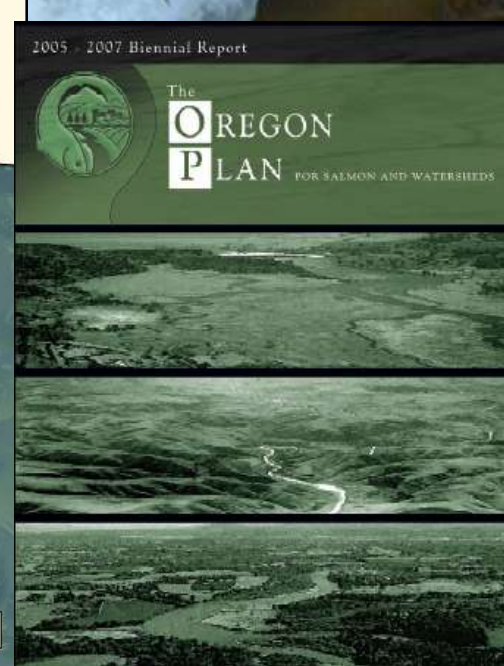
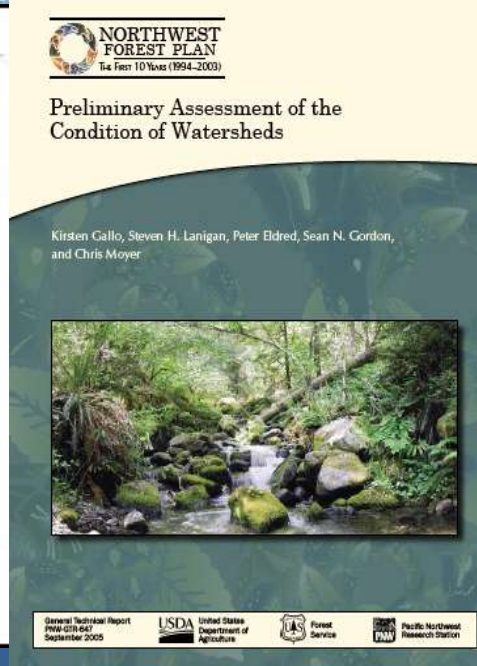
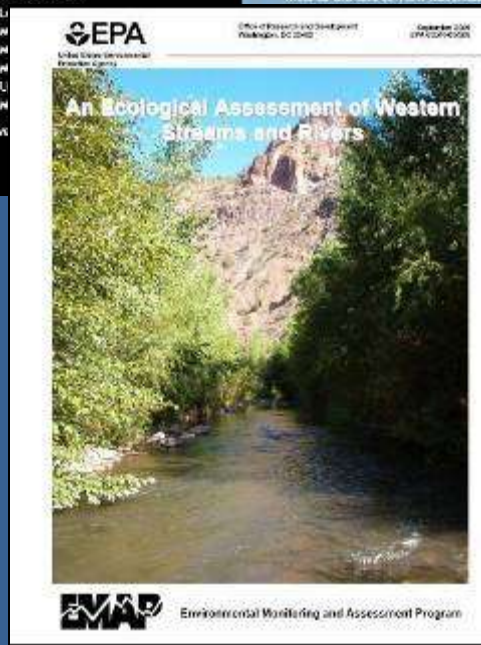
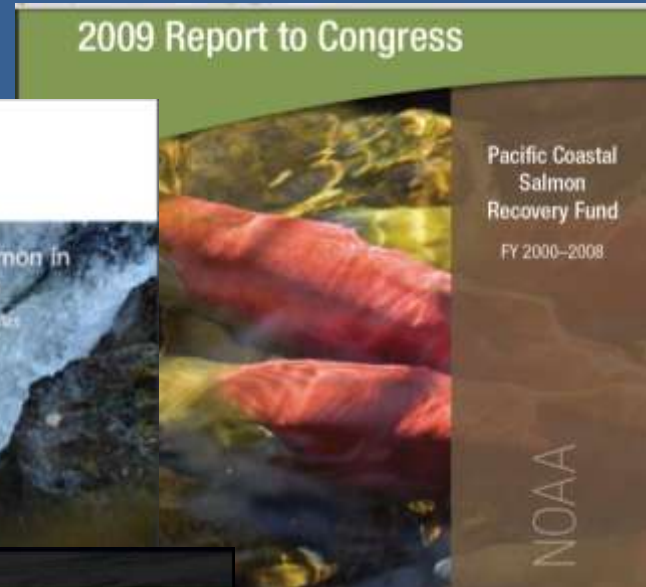
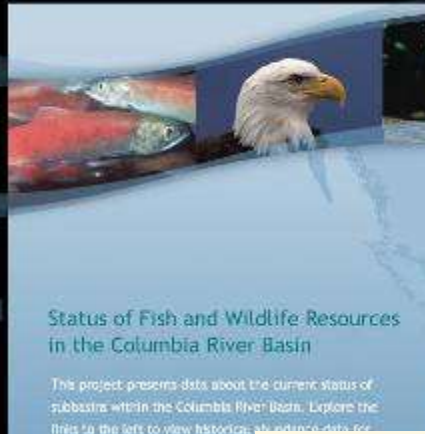


Communicating Complex Information in Easily Understood Terms

Question: Is water clean and cool enough to support wild salmon?



Reporting Pacific Northwest Fish, Wildlife & Ecosystem HLIs



HLI's reported in Pacific Northwest



From PNAMP HLI Report 2008



HLI's reported in Pacific Northwest

- Watershed Health
 - Water Quality Index
 - Stream Flow
 - Sediment Quality Index
 - Habitat Quality Index (in-stream and riparian)
 - Biological Health Index (in-stream)
 - Land Use / Land Cover
- Salmon
 - Abundance of wild spawners
 - Abundance of adults harvested
 - Abundance of juveniles
 - Abundance of hatchery spawners

From PNAMP HLI Report 2008



Similarities among Pacific NW HLIs

Northwest Power and Conservation Council 2010 approved implementation indicator add-ons

- Hydrosystem survival and passage of juvenile and adults
- Council Actions including:
 - i) Harvest number and rates;
 - ii) Wildlife habitat units acquired relative to loss by dam;
 - iii) **Number of instream fish passage improvements (screens & barriers);**
 - iv) **Potential maximum additional miles of fish habitat made accessible;**
 - v) **Amount of land protected for fish and wildlife;**
 - vi) Coordination of Council Fish and Wildlife Program with other
 - vii) fish and wildlife entities, activities, and programs in the basin

Washington GSRO 2009 State of Salmon in Watershed Implementation Indicators

- **Fish passage barriers corrected and stream miles opened**
- Acres-feet of water restored to streams
- Endangered species act complaint harvest goals
- Salmon friendliness of hydroelectric projects
- **Acres acquired for salmon restoration (proposed)**
- Hatchery Programs meeting scientific standards
- Average compliance rate for salmon and steelhead fishers
- Salmon recovery grants
- Volunteer hours in watershed and salmon recovery activities
- Recovery plan implementation progress

Barriers removed / Stream miles made accessible to fish / Acres protected

Oregon Watershed Enhancement Board Oregon Plan for Salmon and Watersheds 2005-2007

- Riparian miles treated
- Road: Miles of road closures and decommissioning
- Road: Miles of road improvements
- Fish passage: stream crossings improved
- **Fish passage: Miles made accessible to fish due to stream crossing improvements**
- **Fish passage: push-up dams retired**
- Fish screens: irrigation diversions with fish screens installed
- **Acres enrolled in CREP Program**

NOAA-Fisheries NW Regional Office 2009 PCSRF Implementation Indicators

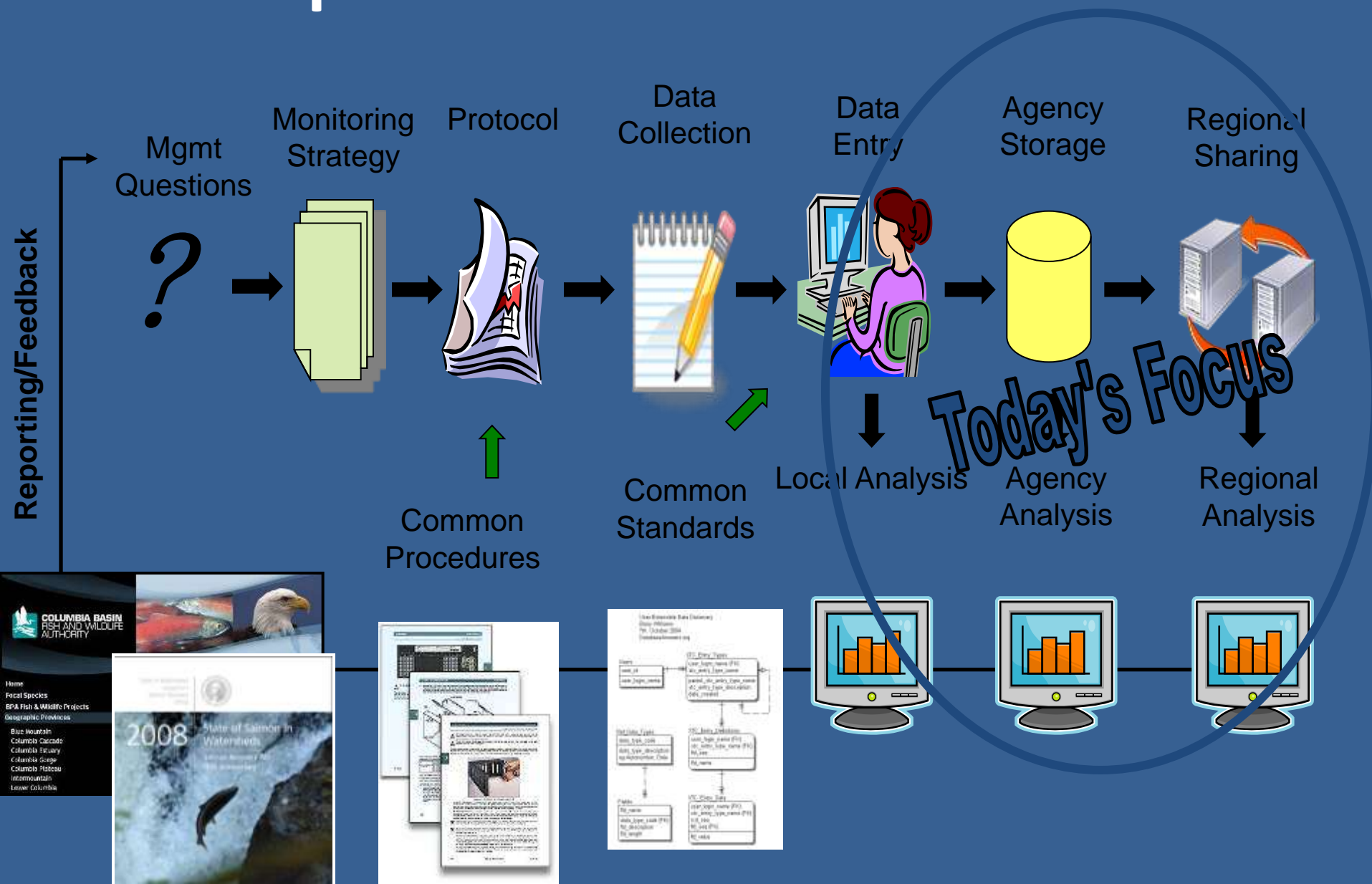
- Stream miles treated of instream habitat & riparian habitat
- Acres created of wetland and estuarine habitat
- Acres treated of wetland, estuarine, riparian, and upland habitat
- **Acres of land acquired or protected**
- Stream bank miles acquired or protected
- **Number of barriers removed for fish passage**
- **Stream miles opened for fish passage**
- Number of fish screens installed for fish passage
- Number of fish marked for management strategies
- Number of ESUs and DPSs with factors limiting recovery identified
- Miles of stream monitored
- Number of assessments completed for RME

High Level Indicators History

- Topic has been an ongoing interest for many entities
- PNAMP efforts include
 - White paper summary 2008
 - Responding to 2008 request from NWEIS for assistance: Recommendations 2009
 - Using as baseline to inform PNAMP priorities



Steps needed to feed into HLIs



Pacific Northwest HLIs for fish, wildlife, and ecosystems an ongoing effort

